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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2018/2019

MID 7133 – INSTRUCTIONAL SYSTEMS DESIGN
(All sections / Groups)

23 MAY 2019
10.00 a.m - 12.00 noon
(2 Hours)

INSTRUCTION TO STUDENT

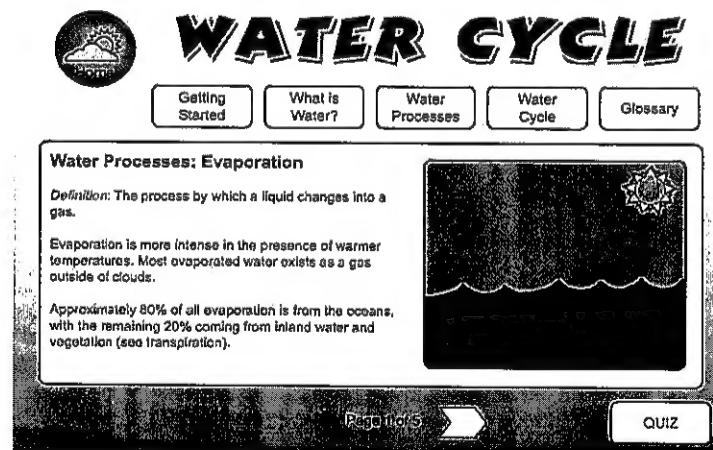
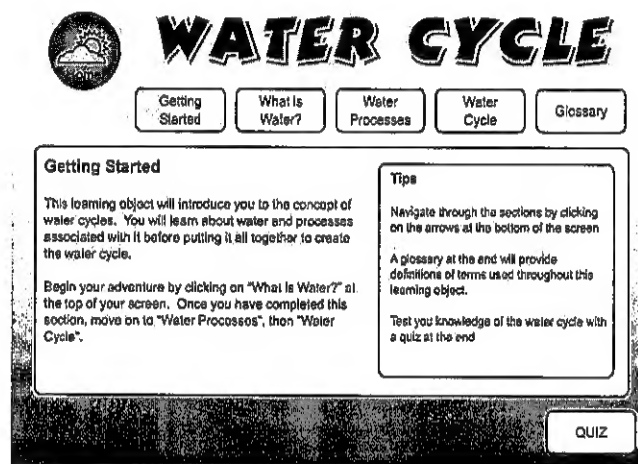
1. This Question paper consists of 9 pages with 5 Questions only.
2. Answer **FOUR** out of FIVE questions . All questions carry equal marks and the distribution of the marks for each question is given .
3. Please print all your answers in the Answer Booklet provided.

Question 1

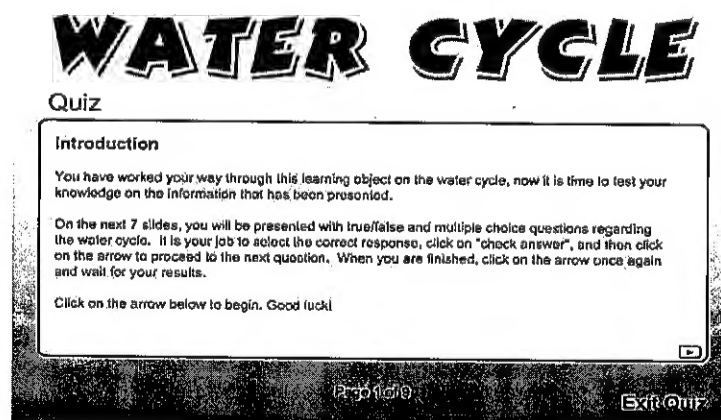
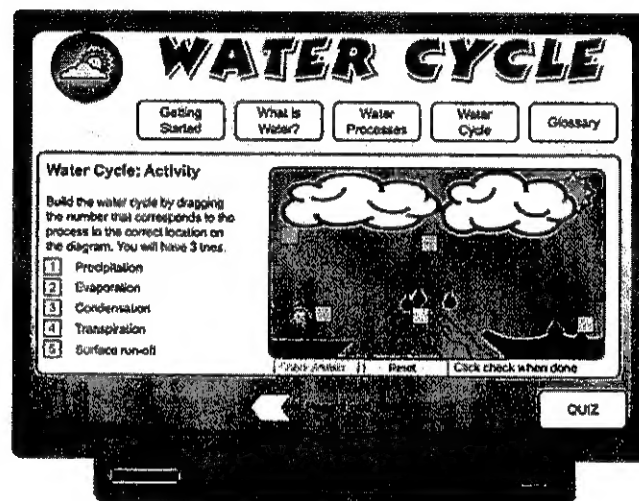
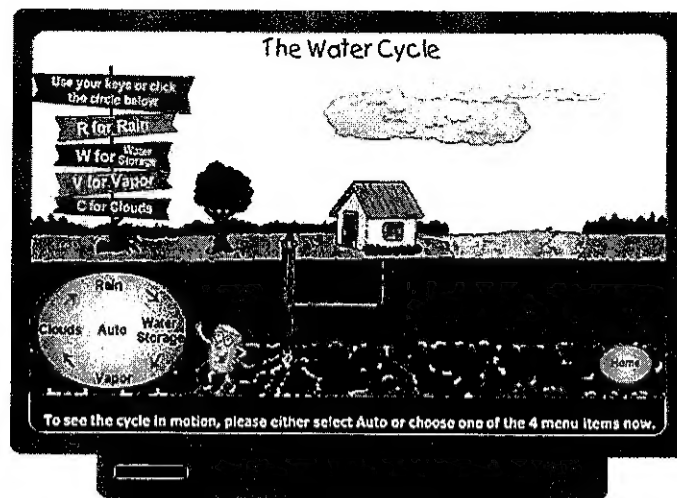
- Draw a task analysis diagram for a course with one goal and four measurable objectives/outcomes (10 marks).
- Design an e-learning content using Gagne 9 Events of Instruction, based on one of the learning outcomes stated in question 1(a) above (10 marks).

Question 2

- What are the five types of content according to Merrill's Component display theory? Provide an example for each content type (10 marks)?
- Explain the components of an e-learning content based on the example below. (10 marks)



Continued ...



Continued ...

Question 3

- a) Why is WEBQUEST an example of a constructivist and collaborative instructional strategy for e-learning? (5 marks)
- b) Create an e-learning lesson using the **WEBQUEST** strategy for the following example which describe the 4 sections in a **WEBQUEST**. Please complete the **Process Section** that explains the steps to complete the task. You should have at least a minimum of 3 steps. (15 marks)

Welcome to a Murder on Midway Street!!

This WebQuest is designed to take students through the exploration of evidence using Science to solve a murder mystery. It is geared for 15-16 years old students, with an overview knowledge of Science.

I. Introduction

A Forensic Science WebQuest! Join us as we take a journey through science to see how important it can be in our lives, especially when tragedy strikes! Get ready to dive in and roll up your sleeves to find out who-done-it and with what in the case of a murder on Midway Street! Help us bring justice to the killer that has run amock in our very own school and taken away one of our very own! Let's do this.

II. Task

Your group will work together to solve the Murder on Midway Street! You will use different fields of science to explore and understand how science can help solve crimes. Each group member will choose a career in forensic science to research. Then you will use your findings about your field to come together with your group to solve the case!

Your group will solve the case and present your suspect and the supporting evidence you have on the suspect in an evidence book with an accompanying visual presentation (poster, powerpoint, video, newspaper...)

So here's what we know:

Early one morning Mrs. Tan arrives for morning duty and as usual walks down to the gym to wait on students to arrive. When she opens the door the first thing she sees is Mr. Malek sprawled on the new gym floor in a pool of blood! OH NO! As she rushes in to see if there is anything she can do to help him, she quickly sees she was just too late. Who could have done this horrible deed? How did it happen? What was the murder weapon? So many questions unanswered... We need to get to the bottom of this and quick before the students start to arrive!

Continued ...

The police are called, and they narrow down the list of suspects to the following three:

DATA COLLECTED (EVIDENCES)	SUSPECTS		
	Coach Azman	Teacher Selena	Student Chandran
	<ul style="list-style-type: none"> • Blood Type A • Whorl fingerprints • DNA profile listed in figure below • Last seen wearing a blue polo with khaki pants 	<ul style="list-style-type: none"> • Blood Type O • Tented Arch fingerprints • DNA profile listed in figure below • Last seen wearing a yellow blouse with blue pants 	<ul style="list-style-type: none"> • Blood Type AB • Right Loop fingerprints • DNA profile listed in figure below • Last seen wearing a black blazer with a red undershirt and blue jeans

The Clayton PD has made a profile sheet for each of the suspects that includes their blood type, DNA profile, fingerprints and the clothes they were last seen wearing. It is now your job as the CSI's to investigate the scene and find all the evidence left by the culprit! Once you have collected evidence from each field, use your evidence and the profiles to figure out who's behind this cruel deed!

III. Resources:

- i. <http://www.forensic-entomology.com/>

The science of forensic entomology is multidisciplinary. It involves the fields of insect taxonomy, physiology, genetics, acarology, population dynamics, ecology, and statistics. Although entomological evidence is most often used to establish a portion of the postmortem interval in human and animal death, it often involves food product contamination cases, and urban entomology. Utilize this website as a reference as you explore the science behind forensic entomology.

- ii. <https://work.chron.com/forensic-science-career-serologist-14765.html>

Forensic serologists assist in criminal investigations by analyzing blood, urine, saliva, semen and other bodily fluids found at crime scenes. Their work can identify possible suspects, determine cause of death and help detectives unravel the sequence of events surrounding a crime. Read more about the role of serologists in criminal investigations through this website.

Continued ...

- iii. <https://learn.genetics.utah.edu/content/science/forensics/>

A geneticist conducts a Forensic DNA profiling or originally known as "DNA fingerprinting," for criminal investigations. The analysis of DNA has helped to acquit or convict suspects in many of the most violent crimes, including rape and murder. Study more about geneticists in this website.

- iv. <http://www.crimescene-forensics.com/Fingerprints.html>

- v. <http://www.forensicsciencesimplified.org/trace/>

The websites above provide descriptions about the role of Trace Specialists in criminal investigations.

- vi. <https://science.howstuffworks.com/csi1.htm>

You will learn in detail about crime scene investigations in this website.

IV. Evaluation Rubric

Element	Beginning 1	Progressing 2	Qualified 3	Exemplary 4	Score
Individualized Research	Student visited less than half of the websites and answered fewer than half of the questions on the worksheet.	Student visited some of the websites and attempted to answer most of the questions on the worksheet.	Student visited every website and partially answered every question on the worksheet.	Student visited every website and completed every question on the research worksheet.	
Collaboration with Peers	Rarely listens to, shares with, and supports the group. Often causes problems with the group and hinders group progress.	Often listens to, shares with, and supports others in the group. Sometimes may not be a good team member.	Usually listens to, shares with, and supports others in the group. Does not cause any significant problems in the group.	Almost always listens to, shares with, and supports the efforts of others in the group. Works to keep group cohesion and effectiveness.	
Content in Lab Report	Shows little understanding of how fields of science fit in to solving an investigation. Very little detail in explanation.	Shows some understanding of how fields of science fit into an investigation. Some detail in explanation.	Shows good understanding of how fields of science fit into an investigation. Significant detail in explanation.	Shows full understanding of how fields of science fit into an investigation. Full detail in explanation.	
Continued ...					

Presentation	Group use no visual or multimedia presentations	Group uses no multimedia but include some graphics	Group uses some multimedia and some graphics for an interesting presentation.	Group uses a variety of multimedia types and graphics. Presentation is interesting and eye catching	
Findings	Group does not find the correct suspect. Does not follow evidence in a logical manner.	Group does not find the correct suspect, but follow evidence in a semi-logical manner.	Group does find the correct suspect. Group follows evidence in a generally logical manner.	Group does find the correct suspect. Group follows evidence in a logical manner and is able to explain how they came to their correct conclusion.	

Question 4

Based on your understanding of storyboarding, develop one screen for the e- learning contents given below. The storyboard should include:

- the media elements used
- the interactivity in the screens
- the hyperlinks/hypertext (if appropriate), and
- Any needed directions for a user

An example of a storyboard template

Screen (no. 1 of ____)		Graphics Instruction	Media/Programming

You may use the storyboard template to develop a storyboard for the following two contents. (Total: 20 marks – 10 marks for each storyboard)

Continued ...

Content for storyboarding

I. 7 C's of Effective Communication

The 7 C's of effective communication, also known as the **seven principles of communication** are a useful way to ensure good and **business communication**. The 7 C's of Effective Communication provide a useful check list as a result of which both written and **verbal communication** pass off in a clear, plain, target group-oriented and well-structured manner.

Completeness

The message must be complete and geared to the receiver's perception of the world. The message must be based on facts and a complex message needs additional information and/ or explanation. A good subdivision of subjects will clarify the message as a result of which there will be a complete overview of what is said.

Concreteness

Concrete business communication is also about a clear message. This is often supported by factual material such as research data and figures. The words used as well as the sentence structure can be interpreted uni-vocally. Nothing is left to the imagination.

Courtesy

In addition to considering the feelings and points of view of the target group, it is also important to approach the audience in a friendly and courteous manner. Use of terms that show respect for the receiver contribute towards effective communication. The same goes for the manner in which you address someone. Not everyone will be charmed if you use a familiar form of address and use of a formal address could come across as too distant. By using the word 'they' a larger audience is immediately addressed.

Correctness

A correct use of language has the preference. In written business communication, grammatical errors must be avoided and stylistic lapses or a wrong use of verbs are not sufficient either in verbal communication. A correct use of language increases trustworthiness and the receiver will feel that they are taken seriously.

Clarity

Clear or plain language is characterized by explicitness, short sentences and concrete words. Fuzzy language is absolutely forbidden, as are formal language and cliché expressions. By avoiding parentheses and keeping to the point, the receiver will get a clear picture of the content of the message. Briefly-worded information emphasizes the essence of the message.

Continued ...

Consideration

Communicating with the target group (Consideration). In order to communicate well, it is important to relate to the target group and be involved. By taking the audience into account, the message can be geared towards them. Factors that play a role in this are for example: professional knowledge, level of education, age and interests.

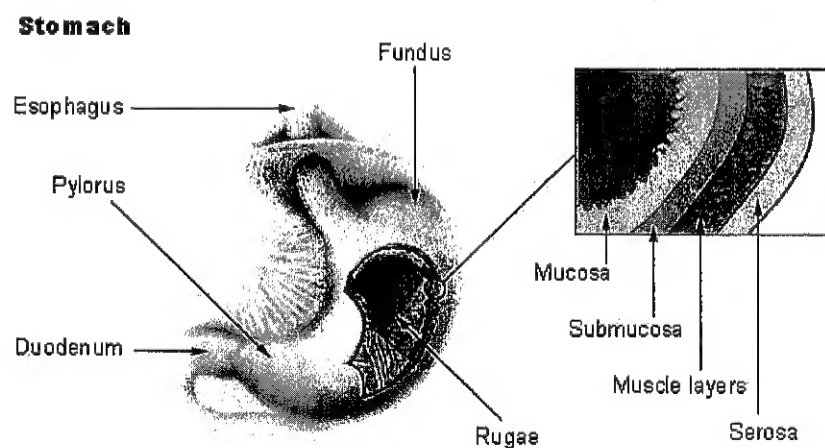
Conciseness

A message is clear when the storyline is consistent and when this does not contain any inconsistencies. When facts are mentioned, it is important that there is consistent, supporting information. Systematically implementing a certain statement or notation also contributes to clear business communication. When statements are varied, they will confuse the receiver.

II. Gastrointestinal Tract

The digestive system is made up of the gastrointestinal tract—also called the GI tract or digestive tract—and the liver, pancreas, and gallbladder. The GI tract is a series of hollow organs joined in a long, twisting tube from the mouth to the anus. The hollow organs that make up the GI tract are the mouth, esophagus, stomach, small intestine, large intestine, and anus. The liver, pancreas, and gallbladder are the solid organs of the digestive system. The GI tract is composed of four layers. Each layer has different tissues and functions. From the inside out they are called: mucosa, submucosa, muscularis, and serosa.

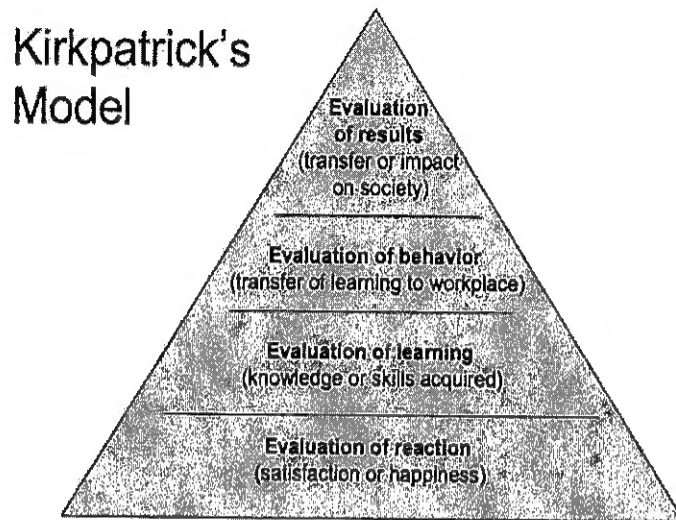
The mucosa is the innermost layer, and functions in absorption and secretion. It is composed of epithelium cells and a thin connective tissue. The mucosa contains specialized goblet cells that secrete sticky mucus throughout the GI tract. On the mucosa layer, small finger-like projections called villi and microvilli help to increase surface area for nutrient absorption.



Continued ...

Question 5

- a) Describe the two types of evaluation in e-learning and give an example for each (6 marks)
- b) Explain how the following evaluation model is used for e-learning purposes? (4 marks)



Kirkpatrick's (2006) Hierarchy of evaluation.

- c) Design an e-learning evaluation for **only two (2)** of the characteristics below that are essential in an e-learning content (10 marks).
- Instructional design and pedagogical soundness
 - Content quality
 - Interactivity and navigation design
 - Screen and interface design
 - Technical soundness

End of Paper

